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BULLETIN NO. 316

The Standard of Living of Farm Families in Grayson County, Kentucky

By MERTON OYLER

RELATION TO PREVIOUS STUDIES

Sections of Kentucky have been included in three previous studies of the cost of living of farm families. The first was made by the Bureau of Agricultural Economics of the United States Department of Agriculture. Families in Shelby, Mercer, Jessamine, Montgomery, Bourbon, Scott, Woodford, and Fayette Counties were included in a study of farm ownership and tenancy in three states. The cost of living for the year ending December 31, 1919, was reported[1] for the areas in the three states as a group.

The second study was of a group of 370 families in Mason County and included the cost of living for the year ending July 1, 1923. This study, made jointly by the federal Bureau of Agricultural Economics and the Kentucky Agricultural Experiment Station, was included as a unit in a study of 2,886 white farm families of selected localities in 11 states.[2]

The third included 203 families in Laurel County, whose cost of living for the year ending July 1, 1928, was studied[3] cooperatively by the Department of Farm Economics, Kentucky Agricultural Experiment Station, and the Division of Farm Population and Rural Life, Bureau of Agricultural Economics, U. S. Department of Agriculture.

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[1] "Cost of Living in Farm Homes in Several Areas of Kentucky, Tennessee, and Texas," Division of Farm Population and Rural Life, Bureau of Agricultural Economics, U. S. D. A. Mimeograph Report, March, 1924.

[2] "The Farmer's Standard of Living," U. S. D. A. Department Bulletin No. 1466, November, 1926.

[3] See Kentucky Experiment Station Bulletin No. 301, "Cost of Living and Population Trends in Laurel County, Kentucky."

The first two studies included families from the more prosperous parts of the state. The third included families from an agricultural county in the Appalachian Plateau, a region of low incomes. It is comparable to the area chosen for the present study.

Description of the sample. Farm families from two areas in Grayson County were included in this study. This county is in the west central part of the state, about 60 miles southwest of Louisville, in the midst of a diversified farming section of low incomes. The 1920 census showed that 80.6 percent of the farmers of this county owned their farms. The 1925 agricultural census showed that 81.8 percent were owners and only 9 farmers of the county were negroes. It also showed that in the average value per farm, of all farm property (land, buildings, implements, machinery, and livestock on farms), 37 of the 120 counties in Kentucky ranked below Grayson County. The average for Grayson County was $2,098; for the county ranking lowest, $1,025; and for the state, $3,727. The average of two bordering counties was 6.6 percent below that of Grayson. The other four bordering counties had an average of about 34 percent above that of Grayson. The 1920 census showed that for this same item, 32 of the 120 counties ranked below Grayson County.

The Louisville-Paducah Division of the Illinois Central Railroad crosses the middle of Grayson County from east to west. Previous to 1928 no surfaced road reached Leitchfield, the county seat. During that year, the road from Elizabethtown, the county seat of the county on the east, was graded and graveled as far as Leitchfield. During 1929 it was completed 12 miles westward to Caneyville.

The Department of Farm Economics, Kentucky Agricultural Experiment Station, in cooperation with the Division of Farm Management and Costs Bureau of Agricultural Economics, U. S. Department of Agriculture, had previously obtained business analysis records by the survey method from 233 farms in the county, for the year ending March 1, 1929. One group of records was from the area surrounding Leitchfield and the

other from the area surrounding Caneyville, in the western end of the county. Both areas extended several miles from the new state highway and included families whose use of automobiles was confined to not more than seven months of the year. Family living records for the same 12-month period were obtained by the survey method from 58 families in the Leitchfield area and 80 families in the Caneyville area. These two groups of records were tabulated separately but no significant differences were found and the data will be presented as a single unit of 138 families. Only 3 of them were tenant families, the others were either full owners or part owners.

INCOME AND OUTGO

Table 1 gives a summary of the income and the outgo of the 138 families for 1928.[4] The families were grouped according to the amount of the cash income. Unfavorable weather had reduced the crop yields in the area for the year studied and as a result the cash incomes were slightly below normal.

TABLE 1. Cash income and outgo of 138 farm families in Grayson County, Kentucky, 1928.

	Groups by amount of cash income				All families
	Under $500	$500 to $999	$1000 to $1499	$1500 and over	
Number of families	42	54	23	19	138
	Dols.	Dols.	Dols.	Dols.	Dols.
Cash income from:					
The farm	317	659	1038	2395	857
Work off the farm	14	48	99	93	52
Other sources	12	45	49	83	41
Total cash income	343	752	1186	2571	950
Cash outgo for:					
Farm expenses	269	396	782	1529	577
Family living	270	345	496	620	385
Total cash outgo	539	741	1278	2149	962
Cash income less outgo	—196	11	—92	422	—12
Family living from the farm	283	337	368	467	344

Sources and amounts of cash income. Work off the farm includes work which the farmer did away from home. The

[4] The data on farm income and outgo in this section were taken from a farm management study made in 1928 by the Ky. Agricultural Experiment Station in cooperation with the Division of Farm Management and Costs of the Federal Bureau of Agricultural Economics.

kinds of work and the resulting incomes were as follows: 11 men received a total of $1558 from hauling, 1 man received $800 for carrying mail, 1 received $750 for railroad work, 3 received a total of $740 for carpentering, 5 received a total of $670 for various kinds of machine work, 14 received a total of $643 for work on neighboring farms, 2 received a total of $580 for road work, 2 received a total of $570 from lumber dealing, 1 received $300 as salesman, 1 received $270 as coal dealer, 1 received $200 for working in timber, 1 received $100 for work as a plumber, and 1 received $50 for work as an auto mechanic.

Income from other sources includes that which was obtained with little or no effort on the part of the farmer himself. The 138 families had from other sources a combined income of $5,653 or an average of $41 each. Children at home contributed a total of $1,745 to eight families and children away from home contributed a total of $444 to two families. Boarders were the source of a total income of $691 to seven families. Two farmers' wives together earned $929. A pension of $480 was received by one family. Six families received a total of $741 interest from investments and one received $260 rent from other property. Gifts amounting to $363 were received by thirteen families. Six families had incomes from two of these sources, 34 different families shared in these other sources of income, by amounts ranging from $4 to $840 and averaging $166 each.

The entire cash income averaged $950 per family for the year, $857 of which was from the sale of farm products, $52 for labor which the farmer did away from home and $41 from other sources as just enumerated.

Cash expenditures in the total family budget. The entire cash outgo averaged $962 per family or $12 more than the entire cash income. Of the outgo, $577 were spent in carrying on the farm business and $385 for the family living.[5]

THE FAMILY LIVING

Classification used for the family living goods. The plan of

[5] This is not identical with the item, "Family living purchased, total," which appears near the bottom of page 153 in the appendix. The latter includes the family share of the auto depreciation, as given in the same table in the appendix, page 155, footnote (**). As this is not a cash expenditure it is not included in the cash outgo.

classification of family living goods as used in the present study is identical with that used in the Laurel County study[6] and is based on the one used by Dr. Kirkpatrick in the study of the 2,886 families.[7]

The following is a classification of the groups that are used and a list of the subdivisions in those groups that are less standardized:

1. Food.

2. Clothing costs include sewing, dry-cleaning, pressing, and shoe repairing. A few used garments received as gifts in several families were valued at what they were considered worth in comparison with new garments of similar kinds.

3. Housing costs include taxes, insurance, improvements, repairs, and depreciation; 10 percent of total value of house is used as annual cost of rent.

4. Furnishingings and equipment include musical instruments, furniture, pictures, floor covering, bedding, linens, tableware, and equipment for cooking, sewing, cleaning, laundry, and canning, purchased during the year. Depreciation of furnishings in the home was not taken into account.

5. Operation goods include fuel furnished by the farm; fuel, soap, cleansers, and matches purchased; domestic help, laundry, telephone service, postage and train or bus fare. They also include the share of automobile expense chargeable to household and family use. The total automobile expense includes depreciation, gasoline, oil, license, insurance, repairs and other accessories.

6. Maintenance of health includes the services of occulist, doctor, nurse and dentist, hospital bills, and medicines of all kinds purchased during the year.

7. Advancement goods include board and lodging at high school or college, school and college textbooks, supplies and tuition, reading matter in the home, organization and club dues, radio sets and supplies, phonographs and records, sports, vacation trips, church support and benevolences.

8. Personal goods include barber's fees, toilet articles, gifts, jewelry, candy, and tobacco.

9. Insurance includes premiums paid on life, endowment, health or accident policies during the year.

10. Unclassified goods include burials, cemetery lots, and other goods, the purpose of which was not specified.

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[6] Kentucky Agricultural Experiment Station Bulletin No. 301.

[7] "Farmers Standard of Living," U. S. D. A. Department Bulletin No. 1466, pp. 11 and 12. November, 1926.

Costs were obtained for all purchased articles and services, but products furnished from the farm were valued at prices for which they could have been sold at the farm.

Size of family and of household. The family, as the term is used in this study, includes parents, sons and daughters who are at home or who, while away at school or elsewhere, are supported from the family purse. The term household means all the persons sheltered in one dwelling and fed, usually, at a common table. Thus, the household may include (in addition to the family) relatives, hired help, boarders, and others. Relatives and others are taken into account in all costs when supported from a common income. When not supported from a common income, they are excluded under all except food and rental costs. Hired help and boarders are included only under food and rental costs.

When the three groups of families, as given in Table 2, are compared it is important to consider the average size of the family and of the household. The average size of the family was 4.1 persons in the Grayson County group, 4.8 in the Laurel County group and 4.4 in the group of 2,886 families. The average size of the household was 4.4 persons in the Grayson County group, 5.3 in the Laurel County group and 4.8 in the group of 2,886 families.

Range in total value of family living. The average value of all family living for the 138 families of this study was $736. For separate families this value ranged from $211 to $2,157; for three families the value was below $300 and for two families it was above $1500.

Comparison with families of other studies. In Table 2 the families of this study are compared with two other groups of farm families—the 203 families of Laurel County studied in 1928 and the 2,886 families of selected localities in 11 states, studied in 1922-24. The latter includes the group of 370 families of Mason County, Kentucky, referred to on page 131. While the average value of the family living for the Mason County group was nearly seven percent below the average for the 2,886 families yet it was similar enough to make unnecessary the adding of another group average to the comparison.

The average value of all family living was $47 (14.7 percent) more for the 138 families of Grayson County than for the Laurel County families. This is all the more significant because the average size of family was seven-tenths of a person less in the Grayson County group than in the Laurel County group. The range in the value for the individual families was $314 greater for the Grayson County group. Three dollars of this was at the lower limit and $311 at the upper limit. The median point was $114 higher for the Grayson County group. The main difference between the two distributions was that in the Grayson County group about eight

TABLE 2. Family living furnished by the farm and purchased.
(Families of this study compared with families of Laurel County, Kentucky, and families of selected localities in 11 states.)

ITEM	138 families of Grayson County, Kentucky		203 families of Laurel County, Kentucky, 1928*		2886 families of selected localities in 11 states†	
	Dollars	Percent of total	Dollars	Percent of total	Dollars	Percent of total
Total value of all goods	736	100.0	689	100.0	1598	100.0
Furnished by farm	344	46.7	365	52.9	684	42.8
Purchased	392	53.3	324	47.1	914	57.2
Food	333	45.3	422	61.2	659	41.2
Furnished by farm	244	33.2	308	44.6	441	27.6
Purchased	89	12.1	114	16.6	218	13.6
Clothing	140	19.0	94	13.6	235	14.7
Furnished by farm	—	—	1	.1	—	—
Purchased	140	19.0	93	13.5	235	14.7
Rent (furnished by farm)	72	9.7	44	6.5	200	12.5
Furnishings and equipment	15	2.1	15	2.1	40	2.5
Operation goods	69	9.4	47	6.8	213	13.3
Furnished by farm	28	3.8	11	1.6	43	2.7
Purchased	41	5.6	36	5.2	170	10.6
Maintenance of health	24	3.2	16	2.3	61	3.8
Advancement goods	51	6.9	30	4.4	105	6.6
Personal goods	18	2.4	18	2.6	41	2.6
Furnished by farm	—	—	1	.1	—	—
Purchased	18	2.4	17	2.5	41	2.6
Insurance, life and health	12	1.7	3	.5	41	2.6
Unclassified	2	.3	—	.0	3	.2

*Kentucky Experiment Station Bulletin No. 301.
†Kirkpatrick, E. L. "The Farmer's Standard of Living," pp. 16, 17, U. S. D. A., Department Bulletin No. 1466, November, 1926.

per cent more of the families were in the $900 to $1,199 interval and about that same percentage less of the families were in the intervals under $900.

Money values not an adequate measure of satisfaction. It is recognized that money value alone is not an adequate measure of satisfactions enjoyed. These are greatly influenced by the use of leisure time and the attitude of parents and children toward their work. The choice and efficiency in the purchase of articles for the family influence the satisfactions obtained by members of the household. Improvement in the efficiency of buying may greatly increase the satisfaction obtained from the expenditure of a given amount of money.

VALUE OF GOODS USED

Table 3 gives the percentage distribution among the groups of expenditures for the 138 families when sorted according to the total value of the family living. The percent of the total family living furnished by the farm decreased as the total value of family living increased. This inverse relationship also is shown for the separate items of food and operation goods, both the totals and the part furnished by the farm. The percentages used for clothing, for advancement, and for life and health insurance show a direct relationship, that is, each increases with a rise in the value of all goods used.

Food. The average value of the food consumed (both purchased and furnished from the farm) by the 138 families in Grayson County was $333. This was 45.3 percent of the total value of their family living. (See Table 2.) It was a low average food consumption when expressed either in dollars or in percent of the total living.

In order to remove the variation among families due to differences in age and sex a dietary energy scale[8] proposed by Dr. Edith Hawley of the United States Bureau of Home Economics was used to calculate the number of adult-male units per family. Table 4 gives the average size of the household, both in number of persons and in adult-male units.

[8] This scale is given in Table 8 of the appendix.

TABLE 3. Percentage distribution of value of family living among principal groups of goods furnished by farm and purchased.

		Groups by total value of family living				All families
		Less than $600	$600 to $899	$900 to $1199	$1200 and over	
Number of families		57	43	29	9	138
Average size of family	(persons)	3.1	4.2	5.8	5.2	4.1
Average size of household	(persons)	3.2	4.6	6.1	5.4	4.4
Total value of all goods	(dollars)	460	722	1,063	1,497	736
Furnished by the farm	(percent)	53.2	48.4	47.1	29.3	46.7
Purchased	(percent)	46.8	51.6	52.9	70.7	53.3
Food	(percent)	53.0	47.4	43.0	30.4	45.3
Furnished by farm	(percent)	37.7	34.8	33.2	20.5	33.2
Purchased	(percent)	15.3	12.6	9.8	9.9	12.1
Clothing	(percent)	15.0	19.4	20.5	22.3	19.0
Rent (furnished by farm)	(percent)	10.0	9.2	11.0	7.4	9.7
Furnishings and equipment	(percent)	1.7	2.7	1.8	1.9	2.1
Operation goods	(percent)	10.8	10.1	9.0	6.1	9.4
Furnished by farm	(percent)	5.5	4.3	2.9	1.4	3.8
Purchased	(percent)	5.3	5.8	6.1	4.7	5.6
Maintenance of health	(percent)	2.5	2.9	2.8	6.3	3.2
Advancement goods	(percent)	3.8	4.0	6.7	20.1	6.9
Personal goods	(percent)	2.5	2.5	2.7	2.0	2.4
Furnished by farm*	(percent)	—	0.1	—	—	†
Purchased	(percent)	2.5	2.4	2.7	2.0	2.4
Insurance, life and health	(percent)	.7	1.5	2.4	2.0	1.7
Unclassified	(percent)	—	.3	.1	1.5	.3

*Tobacco, grown on the farm.
†Less than .05 percent.

It will be noted that the nine families of the highest "value of family living" group had the highest value of food consumption per adult-male unit, but the next highest "value of family living" group had the lowest value of food consumption per adult-male unit. The large variation among the "value of family living" groups in the value of food used per household was closely associated with the variation in the number of adult-male units per household. The value of food used per adult-male unit varied only seven dollars and nineteen cents between the lowest and highest group average (from $80.86 to $88.05).

TABLE 4. Value of food used per adult-male unit.*

Total value of family living	Number households	Average size of household		Value of food used	
		Number persons	Adult-male units*	Per household	Per adult-male unit
Under $600	57	3.23	2.95	$243.42	$82.52
$600—$899	43	4.62	4.23	342.71	81.01
$900—$1199	29	6.07	5.66	457.67	80.86
$1200 and over	9	5.44	5.17	455.23	88.05
All families	138	4.40	4.06	$333.20	$82.07

*The dietary energy scale used to calculate the equivalent number of adult-male units in each family is given in Table 8 of the appendix. The adult-male unit is based on the food energy requirement of an adult male, taken as 1.

The average value of the food consumed by the Grayson County families was $89 less than the average for the 203 families in Laurel County (See Table 2). The Grayson County families purchased only $25 less food, the greater difference being in the value of the food furnished from the farm. The one item of food furnished from the farm for which the two groups showed the greatest difference of consumption was whole milk[9]. The average for the Grayson County families was 176 gallons costing $28 as compared to 432 gallons costing $107 for the Laurel County families.

Clothing. The average expenditure for clothing by the 138 families of this study was $140, or 19 percent of the total value of their family living. Gifts of clothing were valued at a price which the members of the family thought the articles saved them. These gifts averaged $1.22 for the 138 families. The gifts ranged from $8 to $41 per family, for the seven families which received them. For garments made by members of the family, only the cost of the goods was included. The cost of sewing hired done was included.

When the data were obtained from the families, the cost of clothing for each member was listed separately. Table 5 gives these costs by sex and age groups. One family and 15 other individuals were omitted from this table after being included in

[9] Compare appendix Table 7, p. 153 with Kentucky Agricultural Experiment Station Bulletin No. 305, Table 9, p. 240.

Table 1 to 4 because their clothing costs were not obtained as individual estimates.

The average cost of the clothing for the operators was $33.50. The cost for the homemakers was 84 percent of this amount. For the age group of over 24 years, the daughters spent only 66 percent as much as the sons, and for the 19 to 24 year age group they spent 82 percent as much as the sons. But for the 15 to 18 year and for the 12 to 14 year age groups the daughters spent 112 percent as much as the sons. In the 6 to 11 year age group the daughters spent 89 percent and in the 1 to 5 year age group they spent 113 percent as much as did the sons of the same age groups. No individual costs were obtained for daughters under one year.

TABLE 5. Value per person, by different sex and age groups, of clothing used during one year. (Grayson County, year ending March 1, 1929.)

Groups of persons	Male			Female		
	Number of persons	Average cost Dollars	Relative cost with average for operator as 100	Number of persons	Average cost Dollars	Relative cost with average for homemaker as 100
Operators or homemakers	137	33.50	100	134	28.20	100
Sons and daughters:						
Over 24 years	5	59.80	180	6	39.70	140
19-24 years	15	85.00	250	11	69.70	250
15-18 years	34	51.80	150	38	58.10	210
12-14 years	16	34.60	100	40	38.60	140
6-11 years	33	22.80	70	32	20.40	70
1-5 years	20	9.10	30	19	10.30	40
Below 1 year	2	6.00	20	0	—	—

Rent. The average value of the 138 homes was $720. This was the inventory value placed on the houses by the field workers who obtained farm business analysis survey records for the same year that was covered by this family living study. Ten percent of the value was used as the rental charge. The $72 rent represents 9.7 percent of the total value of their family living.

Furnishings and equipment. The average amount spent for furnishings and equipment by the 138 families was $15.

This was 2.1 percent of the total value of their family living. The expenditures for radio sets and supplies and for phonographs and records are not included here, they are included in the expenditures for advancement. But, as is shown in Table 7 of the appendix, page 155, expenditures for these items totaled only an average of $3.30.

Operation goods. The average value of the operation goods used by the 138 families was $69, or 9.4 percent of the total value of their family living. Of this amount $28 was the value of the wood furnished from the farm. The remaining $41 was expended for goods, distributed as shown in the appendix, page 155. Two of the families had central lighting systems, both acetylene plants. Twenty-six of the families purchased coal and all but 10 of the families used firewood from their own farms. Thirty-seven of the families purchased ice, at an average cost of $1.23. Five families employed household labor, at an average cost of $13.40. Nineteen families hired laundry done outside the home, at an average cost of $7.16.

Fifty-two of the 138 families used automobiles, the group as a whole proportioning the expense evenly between family and farm use. The lower two income groups charged more to the family use, the next highest about equally, and the highest income group charged more to the farm use, see appendix, page 155. Since only 52 of the 138 families used automobiles, the expense per automobile was more than twice as large as the automobile expense per family for the 138 families. The average expense per automobile was estimated to be $98. This figure includes depreciation, which averaged only $33 per automobile. Seven of the automobiles had been operated a sufficient number of years that no depreciation was charged, the repairs offsetting this item. The expense per automobile varied widely among the four income groups, averaging $74, $77, $117 and $135, respectively, from the lowest to the highest income group. A large part of this variation in expense is accounted for by the difference in depreciation of the cars in the four income groups, which averaged $17, $34, $44 and $60, respectively. This indicates that the automobile owners in the two higher income

groups used their automobiles more than did those owners in the two lower income groups, but the larger share of the increase in expense was heavier depreciation, resulting from the use of newer models of automobiles.

Thirty-nine families spent an average of $11.76 for train fare, or an average of $3.30 for the 138 families. One hundred twenty families used telephones, with an annual cost of $5.70 each. The group as a whole charged 58.5 percent of this cost to the farm business, the remaining 41.5 percent was included in the operation goods of the family living. This averaged $2.00 for the 138 families. The average amount spent for postage was $2.10.

Maintenance of health. Expenditures for the maintenance of health amounted to $24 per family, or 3.2 percent of the total family living. The distribution was as follows: $3.80 for dental work, $1.60 for oculist and glasses, $8.50 for doctor's fees, $4.30 for medicine, and $5.30 for hospital and nurse.

Advancement goods. The 138 families spent an average of $51 for advancement goods, or 6.9 percent of the total value of their living. A tabulation of the separate items in this group showed that they spent $23.80 for formal education, $1 for lodge organization dues, 70 cents for phonographs, records or other music, $2.60 for radio sets or supplies, $3.80 for reading material, $4.90 for vacation and other special trips, $9.40 for church, Sunday school and missions, $1.60 for welfare and charity and $3 for recreation.

Lodge membership was the only type of organization dues paid. Forty-seven persons from 32 families held lodge memberships. The average cost for the 47 memberships was $3.04. A large proportion of these lodge memberships were held primarily for the privilege of carrying life insurance and will be referred to later under that heading.

Eighteen families were using radios, six of which were purchased during the year covered by this study. The average purchase price for the six was $42.21. Members of twenty-nine families took vacations or other special trips at an average expenditure of $23.37 per family.

One hundred seven of the families made contributions averaging $12.12 per family to church, Sunday school and missions. Thirty-two families contributed to public and private forms of charity or welfare an average of $6.98. These two items, when combined with the gifts included under the group of "personal goods" and reported in the next section, form the total benevolences of the families. The four income groups spent an average of $8.23, $12.41, $20.64 and $24.01, respectively, or an average of $14.13 for the 138 families. In terms of percentage of the total value of their family living the four income groups averaged 1.48, 1.80, 2.36, and 2.18 percent, respectively, or an average of 1.92 percent for the 138 families.

An analysis of the reading material by types showed that 74 different families received farm journals—30 received one, 22 received two, 15 received three, 4 received four and 3 received five different journals. When sorted by income groups it was found that 45 percent of the families in the lowest income group received at least one farm journal, and for the next three income groups the percentages were 50, 56, and 79, respectively. Fifty-four percent of the 138 families were subscribers. The 137 magazines received by the 138 families included 65 household, 39 general, 29 religious and 4 fiction magazines. The table in the appendix gives more information about the reading material and the recreation expenditures.

Personal goods. Expenditures for goods of a personal nature amounted to $18 per family, or 2.4 percent of the total value of the family living. They spent $3.10 for gifts; $1.30 for jewelry; $5.50 for barber fees and toilet articles; $2.60 for candy, gum, sodas, etc.; and $5.40 for tobacco and pipes.

Life and health insurance. The 138 families spent an average of $12 for life and health insurance, or 1.7 percent of the total value of the family living. Only 41 families purchased insurance, the average cost for the 41 being $40.60. A large number of the policies were purchased thru a fraternal organization that met locally only to transact insurance business. The local membership fee was included under organization dues, but the policy holders probably considered it as part of the

insurance cost in every case. In several other counties of the state this attitude does not prevail because the local meetings are social gatherings. A pronounced correlation exists between the amount of income of the families and the average expenditure for insurance. The families in the four income groups averaged $4, $8, $18 and $33, respectively.

Unclassified expenditures. These were the expenses of three funerals which amounted to 0.3 percent of the total value of the family living. The average cost of the funerals was $114.50.

SOCIAL AND CULTURAL FACTORS

Operators and homemakers. Of the 133 operators whose place of birth was reported, 80 percent were born in Grayson County, 16 percent in counties bordering Grayson and 4 percent in other counties of Kentucky. Of the 135 homemakers whose place of birth was reported, 84 percent were born in Grayson County, 14 percent in counties bordering Grayson and 2 percent in other counties of Kentucky. The average age of the operators was 48.9 years and of the homemakers, 45.5 years. The operators had attained an average of 7.0 grades of formal schooling the homemakers an average of 7.5 grades.

Sons and daughters. The sons and daughters of the 138 families numbered 505, of whom 33, or 6.5 percent, were reported as now dead. This is an average of 3.7 children born per family and 3.4 now living. One-half of the 472 living children were sons and one-half were daughters, see Table 6. Eleven percent more of the daughters than of the sons were under 18 years of age, 8.4 percent less were 18 years or more and at home, and 2.6 percent less were 18 years or more and away from home.

Sons and daughters away from home had attained an average of 9.4 grades of formal schooling in comparison with 9.8 grades by those at home and 18 years of age or over. For those away from home, the daughters led the sons by one-tenth of a grade; for those at home, the daughters led the sons by eight-tenths of a grade.

Sons away from home left at the average age of 20.8 years and daughters away from home left at the average age of 20.2

years. The average age of sons away from home was 29.5 years and that of the daughters away from home was 29.0 years. For the sons and daughters at home and 18 or more years of age, the average age for the sons was 21.9 years and for the daughters was 22.7 years. Sons away from home and married, 68 in number, were married at the average age of 22.4 years. Daughters away from home and married, 77 in number, were married at the average age of 20.7 years. Sons at home married, 13 in number, were married at the average age of 21.5 years. Daughters at home and married, 7 in number, were married at the average age of 21 years.

TABLE 6. Number and percentages of sons and daughters at home and away from home.

Children	Male and female		Male		Female	
	Number	Percent of total	Number	Percent of total	Number	Percent of total
Under 18 and at home	218	46.2	96	40.7	122	51.7
18 or more and at home	86	18.2	53	22.4	33	14.0
18 or more and away from home	168	35.6	87	36.9	81	34.3
Total	472	100.0	236	100.0	236	100.0

Of the 87 sons 18 or more years of age and away from home, 39 were residing on farms, 13 in villages or towns of less than 10,000 and 35 in cities of over 10,000 population. Of the 81 daughters 18 or more years of age and away from home, 39 were residing on farms, 9 in villages or towns of less than 10,000 and 33 in cities of over 10,000 population.

The 39 sons on farms away from home with the 53 sons 18 or more years of age on farms at home make 92, or 66 percent, of the 140 sons 18 or more years of age, that were residing on farms. The 39 daughters on farms away from home with the 33 daughters 18 years or more of age on farms at home make 72, or 63 percent, of the 114 daughters 18 or more years of age, that were residing on farms.

A classification of the occupations of the 87 sons away from home showed that 45 percent were farmers, 17 percent clerical

or professional workers, 14 percent artisans, 11 percent in public service, 8 percent merchants or dealers, and 5 percent laborers.

A classification of the 4 single daughters and of the husbands of the 77 married daughters showed that 44 percent were farmers, 21 percent clerical or professional workers, 12 percent laborers, 9 percent artisans, 9 percent in public service, and 5 percent merchants or dealers. The four single daughters were in clerical occupations.

Social relationships. Participation of the members of the families was higher for church than for any other organized activity. Thirty-nine percent of the operators and 54 percent of the homemakers are church members. For attendance they show little variation, 86 percent of the operators (both members and non-members) and 88 percent of the homemakers attended church during the year included for the survey. Those who attended averaged 22 times[11] for the year, the same average for both operators and homemakers. For the sons and daughters at home who were 18 years of age or older, the percent having church membership was only 21. For those under 18 years, the percent was 9. But in attendance both groups surpass their parents. Of the group, 18 years of age or older, 67 percent attended and averaged 27 times[10] for the year. Of the group under 18 years of age, 84 percent attended and averaged 25 times[10] for the year.

Thirty-six percent of the operators and 38 percent of the homemakers attended Sunday School during the year. Those who attended averaged 22 times for the year[11], the same average for both operators and homemakers. Of the sons and daughters at home who were 18 years of age or older, 37 percent attended Sunday School and averaged 29 times. Of those under 18 years

[10] In all the attendance averages given in this section, the average is for only that part of the group which attended at least once during the year. A simple average for the entire group can be obtained by multiplying the given average by the percent who attended.

[11] The group of operators and homemakers who attended Sunday School was not identical with the group who attended church. Moreover, many of those who attended both types of meetings reported a widely different number of times for Sunday School than for church, some reporting more for Sunday School and others more for church. The same average number of attendance for both Sunday School and church is purely a random result of many influences.

of age, 58 percent attended Sunday School and averaged 32 times for the year.

Twenty-three percent of the operators held lodge memberships. Thirteen of the 32 operators held two memberships each. The wife of one operator and the son of another held a membership in lodge. In the 32 families a total of 47 memberships were held. The lodge members in 16 percent of all the families attended lodge meetings during the year and averaged 4 times per family for those who attended.

Five percent of the operators and six percent of the homemakers attended movies, with an average for each of three times during the year. Including the children of all ages at home, 12 percent of them attended movies. The average for those children who attended was 16 times during the year.

Thirty-two percent each of the operators and the homemakers took a vacation during the year, averaging seven days for those operators and eight days for those homemakers who took vacations. Of the sons and daughters at home who were 18 years of age or older, 33 percent took a vacation averaging 8 days. Of those under 18 years of age, 25 percent took a vacation averaging eight days.

Table 9 in the appendix shows the social relationships of the 138 families grouped by the amount of their total cash income. For the four income groups little variation is shown in the percentage of the operators and homemakers who attended church at least once during the year. But when considered from the standpoint of how often they attended during the year, the operators and the homemakers who attended of the lowest income group averaged a considerably smaller number of attendances than those who attended of the other three income groups. Thus, the average number of attendances for the operators in the lowest income group was only 16 for the year and for the homemakers only 14 while in the other three income groups the operators had averages ranging from 23 to 26 attendances and the homemakers, 24 to 26 attendances.

Ownership of automobiles. Only 26 percent of the 42 families in the lowest income group had automobiles while in

the other three income groups 33, 50 and 63 percent, respectively, had automobiles. A two-fold disadvantage of automobile ownership by farm families with low incomes has been emphasized by one research worker[12] in the field of living standards. The analysis of the relation of automobile ownership to church attendance was made to further test the effect of automobile ownership on organization participation. The small percentage of families participating in any other kind of community activity made it impractical to study the relationship of this factor to attendance at other metings. Table 10 in the appendix gives the church membership and attendance of the operators and homemakers of automobile owning and non-owning families grouped by amount of cash income.

For the operators, a much smaller percentage of the automobile owners than of the non-owners are church members. The greatest difference in percentage is found between the automobile owners and non-owners of the lowest cash income group. The homemakers show a similar relationship except in the next to the highest income group. A slightly higher percentage of the operators and homemakers attend church from those families who own automobiles than from those who do not own them. This tendency is very pronounced in the upper income group, is less pronounced in the middle two income groups and is reversed in the lowest income group. For both the operators and the homemakers, in only the lowest cash income group do those automobile owners who attend church at least once during the year average a smaller number of attendances for the year than do the non-owners.

Thus it is evident that automobile ownership bears a peculiar relation to church membership and attendance of the operators and homemakers of the lowest income group. The operators and homemakers of this income group show very similar relationships. A much higher percentage of those who do not own automobiles are church members, or, stating it another way, a much higher percentage of the non-church members have automobiles than have the church members. A higher

[12] Gee, W. and Stauffer, W. H. "Rural and Urban Living Standards in Virginia," p. 35, University of Virginia, 1929.

percentage of the non-owners attend church and the non-owners who do attend average a higher number of attendances. These differences may be because more of the non-members and non-attenders have bought automobiles, rather than the result of a change in attendance after automobile purchase.

The distances of the homes from church were tabulated to discover the relation of this factor to automobile ownership and the consequent effect on church attendance. It was found that the distance from church had no bearing on the other two factors. The non-owners lived only two-tenths of a mile farther from church than the automobile owners. The greatest variation occurred in the next highest income group. Yet, contrary to expectation, the difference between owners and non-owners was less for this than for any other income group.

SUMMARY

This is a study of the standard of living of 138 representatave farm families in a region of low incomes and diversified farming. In dealing with the value of the living of these families it is recognized that money value alone does not furnish an adequate measure of satisfactions enjoyed.

The total value of all goods used in the family living, including goods used from the farm and purchased, averaged $736 for the 138 families. Of this amount 46.7 percent was furnished by the farm and 53.3 percent was purchasd. The Grayson County average is $47 (14.7 percent) greater than the average value of living goods used by the 203 families of Laurel County studied in 1928.

The 46.7 percent furnished by the farm consisted of food valued at $244, rent of house valued at $72, and firewood valued at $28. The 53.3 percent that was purchased included $89 for food, $140 for clothing, $15 for furnishings and equipment, $41 for operation goods, $24 for health, $51 for advancement, $18 for personal goods, $12 for life and health insurance, and $2 for unclassified expenditures. These are discussed in detail on pages 139 to 144.

The average size of the family in this group was 4.1 persons, or seven-tenths of a person less than the average for the Laurel County group. The average size of the household was 4.4 persons, or nine-tenths of a person less than the Laurel County average.

Eighty percent of the operators and 84 percent of the homemakers were born in Grayson County. An average of 3.7 children were born per family (2.0 below the Laurel County average) and an average of 3.4 per family were living at the time of the study. Present marital conditions, occupations and places of residence are given for the sons and daughters (see pages 145 to 147).

Participation of the members of the families was higher for church than for any other organized activity. Some relationship was found to exist between church attendance and ownership of automobiles and was more pronounced in the lowest income group. Social participation of the families of this study in organizations other than church, while small, was considerably higher than for the families included in the Laurel County study.

Altho the average value of the family living for the Grayson County families was 14.7 percent above that of the Laurel County families, the average number of children born per family was 35 percent below the Laurel County average. Very little difference was found between the two counties for the average age of the operators and homemakers or for the percent of native white operators and homemakers. These facts suggest that the lower birth rate in Grayson County is a result of the more rapid assimilation of urban standards, but more research is needed to establish this hypothesis.

APPENDIX

TABLE 7. Summary of the family living of 138 families in Grayson County, Kentucky—1928.

Items		Groups by amount of cash income				All families
		Under $500	$500 to $999	$1000 to $1499	$1500 and over	
Number of families		42	54	23	19	138
Family living from farm—Total	Dolls.	283	337	368	467	344
Food	Dolls.	206	240	262	318	244
Corn	Bus.	7.5	8.1	5.6	6.9	7.3
Value	Dolls.	8.9	9.6	6.6	8.3	8.7
Wheat	Bus.	2.5	4.5	5.6	9.4	4.7
Value	Dolls.	3.4	6.0	7.5	12.7	6.4
Potatoes	Bus.	15.7	14.3	16.7	18.5	15.7
Value	Dolls.	11.9	10.9	12.6	14.0	11.9
Fruits	Dolls.	9.9	10.5	13.3	18.9	12.0
Vegetables	Dolls.	43.7	47.2	57.4	66.9	50.5
Size of garden	Acres	.49	.51	.53	.55	.51
Sorghum syrup	Gals.	.7	2.9	—	—	1.4
Value	Dolls.	.5	2.2	—	—	1.0
Honey	Lbs.	—	—	—	2.6	.4
Value	Dolls.	—	—	—	.4	.1
Butter	Lbs.	88.5	98.0	98.8	102.6	95.9
Value	Dolls.	26.5	29.4	30.0	30.7	28.8
Cream	Gals.	1.1	.8	—	5.5	1.4
Value	Dolls.	1.4	1.0	—	7.1	1.8
Whole milk	Gals.	170.9	165.7	197.3	192.5	176.2
Value	Dolls.	27.3	26.5	31.8	30.4	28.1
Skim and Buttermilk	Gals.	65.5	160.0	140.0	76.4	116.4
Value	Dolls.	2.6	6.4	5.6	3.1	4.7
Mutton	Lbs.	2.7	1.8	—	—	1.5
Value	Dolls.	.1	.1	—	—	.1
Pork	Lbs.	512.0	690.5	665.2	434.7	596.7
Value	Dolls.	40.1	53.4	52.4	72.5	51.8
Poultry,† value	Dolls.	13.3	17.2	23.6	24.5	18.1
Fryers	No.	21.9	28.9	35.3	44.7	30.0
Hens	No.	2.4	2.7	6.0	1.8	3.0
Eggs	Doz.	66.5	78.9	84.1	102.6	80.7
Value	Dolls.	16.8	19.6	20.9	28.2	20.2
Fuel, wood	Cords	9.4	8.8	8.9	11.3	9.3
Value	Dolls.	28	27	27	34	28
House rent	Dolls.	49	70	79	115	72
Other (tobacco)	Dolls.	—	*	.7	—	.1
Family living purchased, total	Dolls.	273	352	506	632	392
Food	Dolls.	88	79	96	111	89
Cornmeal	Lbs.	96.6	102.7	155.5	180.6	120.3
Value	Dolls.	2.7	3.0	4.7	5.4	3.5
Wheat flours	Lbs.	600.2	462.3	585.9	546.7	536.5
Value	Dolls.	24.3	18.8	24.1	22.6	21.9
Potatoes	Bus.	5	.7	.7	.8	.6
Value	Dolls.	.6	.7	.6	.8	.6
Dry beans	Lbs.	28.3	28.2	25.7	33.8	28.6
Value	Dolls.	2.8	2.8	3.0	3.8	3.0

*Less than one-twentieth of a unit.
†Includes two turkeys, one in the second group and one in the fourth.

TABLE 7. (Cont.) Summary of the family living of 138 families in Grayson County, Kentucky—1928.

Items		Groups by amount of cash income				All families
		Under $500	$500 to $999	$1000 to $1499	$1500 and over	
Family living purchased, cont'd.						
Fruits and vegetables‡	Dolls.	1.4	1.5	2.7	4.3	2.1
Butter	Lbs.	.8	.5	.8	9.0	1.8
Value	Dolls.	.3	.1	.3	2.4	.5
Beef, veal and mutton	Lbs.	5.7	1.4	6.1	15.7	5.4
Value	Dolls.	1.4	.4	1.5	3.9	1.4
Pork	Lbs.	20.6	6.9	3.5	12.9	11.3
Value	Dolls.	3.1	1.0	.5	2.0	1.7
Canned vegetables	Cans	2.9	5.7	7.0	6.6	5.2
Value	Dolls.	.4	.7	1.0	1.0	.7
Fish and oysters (Fresh and canned)	Dolls.	1.2	1.5	2.2	2.1	1.6
Cheese	Lbs.	.4	.3	.4	.4	.3
Value	Dolls.	.1	.1	.2	.2	.1
Lard	Lbs.	44.0	30.8	22.9	24.7	32.7
Value	Dolls.	6.3	4.5	3.3	3.5	4.7
Bananas	Doz.	3.3	2.2	2.3	3.0	2.7
Value	Dolls.	.8	.6	.6	.8	.7
Oranges	Doz.	1.2	.9	2.1	1.7	1.3
Value	Dolls.	.4	.3	.7	.6	.4
Lemons	Doz.	1.2	.7	1.4	2.4	1.2
Value	Dolls.	.5	.3	.6	.9	.5
Prunes	Lbs.	.7	.9	1.8	.4	.9
Value	Dolls.	.1	.1	.3	.1	.1
Raisins	Lbs.	1.2	1.6	1.7	4.4	1.9
Value	Dolls.	.2	.2	.2	.6	.3
Oatmeal and other breakfast cereals	Dolls.	2.0	1.8	3.0	5.0	2.5
Macaroni and noodles						
Value	Dolls.	.4	.4	.2	.4	.4
Rice	Lbs.	6.7	5.8	9.8	11.2	7.5
Value	Dolls.	.6	.5	.8	.9	.6
Bread	Loaves	23.0	28.9	31.5	41.3	29.3
Value	Dolls.	2.1	2.2	2.9	4.1	2.6
Crackers	Lbs.	5.0	1.7	5.6	3.7	3.7
Value	Dolls.	1.0	.3	1.1	.7	.7
Peanut butter	Lbs.	1.7	1.1	3.6	4.7	2.2
Value	Dolls.	.4	.3	.8	1.1	.5
Sugar	Lbs.	238.0	272.8	314.6	349.5	279.7
Value	Dolls.	15.4	17.9	20.4	22.2	18.2
Syrup and honey	Dolls.	3.2	3.1	3.7	4.6	3.4
Tea	Lbs.	.2	.1	*	.9	.2
Value	Dolls.	.2	.1	*	.6	.2
Coffee, including postum	Lbs	27.5	26.5	26.9	20.6	26.1
Value	Dolls.	8.9	9.0	9.3	7.0	8.8
Cocoa	Dolls.	.5	.4	.6	.8	.5
Vinegar	Gals.	2.7	2.7	3.5	2.6	2.8
Value	Dolls.	.8	.7	1.0	.7	.8
Extracts, spices, soda, etc.	Dolls.	5.4	5.3	5.8	7.2	5.7
Other groceries	Dolls.	.4	.4	.4	.8	.4
Clothing	Dolls.	99	128	176	221	140
Furnishings & equipment	Dolls.	9	15	20	24	15

‡Does not include citrus fruits. They are listed below.
* Less than one-twentieth of a unit.

TABLE 7. (Cont.) Summary of the family living of 138 families in Grayson County, Kentucky—1928.

Items		Groups by amount of cash income				All families
		Under $500	$500 to $999	$1000 to $1499	$1500 and over	
Family living purchased, cont'd. Operation goods, total	Dolls.	28	39	55	60	41
Fuel and light	Dolls.	5.1	7.3	12.7	7.3	7.5
Coal	Tons	.3	.8	2.2	.7	.9
Value	Dolls.	1.1	2.5	6.8	2.3	2.8
Kerosene	Gals.	20.6	24.4	27.8	27.1	24.2
Value	Dolls.	3.9	4.6	5.0	4.6	4.4
Gasoline and carbide	Dolls.	—	.2	.9	.4	.3
Firewood bought	Dolls.	.1	—	—	—	*
Soaps, cleansers, matches	Dolls.	4.9	5.8	6.7	9.2	6.2
Ice	Dolls.	.2	.3	.3	.6	.3
Household labor	Dolls.	.1	1.1	.2	—	.5
Laundry sent out	Dolls.	.4	1.8	.6	.6	1.0
Car fare	Dolls.	1.6	3.4	2.5	7.8	3.3
Telephone	Dolls.	2.1	2.1	1.7	2.2	2.0
Postage	Dolls.	1.7	2.0	2.3	2.9	2.1
Auto, family use**	Dolls.	11.5	15.9	28.4	29.9	18.5
**Total auto costs	Dolls.	19.6	25.6	56.0	85.4	37.0
Family use	Pct.	58.3	62.0	50.7	35.0	50.0
Farm business use	Pct.	41.7	38.0	49.3	65.0	50.0
Expense for other business use of auto was deducted from receipts to calculate income from work done off the farm.						
Auto depreciation, family	Dolls.	2.6	7.1	10.2	12.1	6.9
Auto depreciation, farm	Dolls.	1.5	3.1	8.8	16.5	5.4
Health goods, total	Dolls.	15	16	49	31	24
Dental work	Dolls.	1.4	4.2	4.2	7.1	3.8
Oculist and glasses	Dolls.	.4	1.2	3.4	3.4	1.6
Doctor's fee	Dolls.	10.9	5.5	11.0	8.2	8.5
Medicine	Dolls.	2.5	5.6	4.4	5.0	4.3
Hospital and nurse	Dolls.	—	—	25.9	7.4	5.3
Advancement goods, total	Dolls.	18	41	70	131	51
Formal education	Dolls.	3.2	17.0	31.4	79.8	23.8
Organization dues	Dolls.	.7	.7	2.4	1.1	1.0
Music (including phonographs)	Dolls.	.6	.8	.6	.5	.7
Radio	Dolls.	.5	1.6	4.3	8.1	2.6
Reading material	Dolls.	2.3	4.0	5.2	4.9	3.8
Daily paper	Dolls.	1.0	2.0	2.5	2.1	1.8
County weekly	Dolls.	.5	.9	1.0	1.0	.8
Farm journals	No.	.7	1.2	1.0	1.4	1.1
Value	Dolls.	.2	.3	.3	.5	.3
Magazines bought	No.	.5	1.0	1.4	1.5	1.0
Value	Dolls.	.5	.8	1.3	1.1	.8
Magazines borrowed	No.	.5	5.8	5.9	1.4	4.4
Books bought	Dolls.	.1	*	.1	.2	.1
Books borrowed	No.	1.3	2.7	8.6	2.4	3.2

* Less than one-twentieth of a unit.

TABLE 7. (Cont.) Summary of the family living of 138 families in Grayson County, Kentucky—1928.

Items		Groups by amount of cash income				All families
		Under $500	$500 to $999	$1000 to $1499	$1500 and over	
Family living purchased, cont'd.						
Vacation & special trips	Dolls.	2.1	4.7	4.3	12.4	4.9
Church, S. S. and Missions	Dolls.	4.7	8.0	14.4	17.4	9.4
Welfare and charity	Dolls.	2.4	.6	1.9	2.5	1.6
Recreation	Dolls.	1.2	3.0	4.7	3.9	3.0
Kodak films	Dolls.	.2	.8	.4	.7	.6
Movies	Dolls.	.1	.9	1.6	.4	.7
Circus and fairs	Dolls.	.1	.5	.9	.3	.4
School athletic contests	Dolls.	.1	*	—	.3	.1
School plays	Dolls.	.3	.5	1.1	.8	.6
Toys, athletic equip.	Dolls.	.4	.3	.7	1.4	.6
Personal goods, total	Dolls.	11	20	22	21	18
Gifts	Dolls.	1.1	3.8	4.3	4.1	3.1
Jewelry	Dolls.	.8	1.7	.9	1.9	1.3
Barber, toilet articles etc.	Dolls.	3.6	5.4	7.1	8.0	5.5
Candy, gum, sodas	Dolls.	1.8	2.7	3.7	2.9	2.6
Tobacco, pipes, etc.	Dolls.	3.9	6.6	6.1	4.2	5.4
Insurance, life and health, total	Dolls.	4	8	18	33	12
Unclassified expenditures	Dolls.	1	6	—	—	2
Percentage distribution of total value of family living:						
Total value of all goods	Dolls.	556	689	874	1099	736
Furnished by farm	Pct.	50.9	48.9	42.1	42.5	46.7
Purchased	Pct.	49.1	51.1	57.9	57.5	53.3
Food	Pct.	52.9	46.3	41.0	39.0	45.2
Furnished by farm	Pct.	37.1	38.8	30.0	28.9	33.1
Purchased	Pct.	15.8	11.5	11.0	10.1	12.1
Clothing	Pct.	17.8	18.6	20.1	20.1	19.0
Rent (furnished by farm)	Pct.	8.8	10.1	9.0	10.5	9.8
Furnishings & equipment	Pct.	1.6	2.2	2.3	2.2	2.0
Operation goods	Pct.	10.1	9.6	9.4	8.6	9.4
Furnished by farm	Pct.	5.0	3.9	3.1	3.1	3.8
Purchased	Pct.	5.1	5.7	6.3	5.5	5.6
Maintenance of health	Pct.	2.7	2.3	5.6	2.8	3.3
Advancement	Pct.	3.2	5.9	8.0	11.9	6.9
Personal	Pct.	2.0	2.9	2.5	1.9	2.5
Insurance, life and health	Pct.	.7	1.2	2.1	3.0	1.6
Unclassified	Pct.	.2	.9	—	—	.3

* Less than one-twentieth of a unit.

TABLE 7. (Cont.) Summary of the family living of 138 families in Grayson County, Kentucky—1928.

Items		Groups by amount of cash income				All families
		Under $500	$500 to $999	$1000 to $1499	$1500 and over	
Composition of family, etc.:						
Size of household	Persons	4.0	4.2	4.9	5.2	4.4
Size of family	Persons	3.7	4.0	4.7	4.8	4.1
Parents	Persons	1.9	1.9	2.0	2.0	1.9
Age of husbands	Years	50.0	49.0	47.5	47.6	48.9
Age of wives	Years	46.0	46.5	42.7	45.1	45.5
Sons and daughters at home	Persons	1.8	2.1	2.7	2.8	2.2
Sons at home	Persons	.9	.9	1.4	1.4	1.1
Average age	Years	13.0	15.5	14.0	14.5	14.3
Daughters at home	Persons	1.0	1.1	1.3	1.4	1.1
Average age	Years	11.4	14.1	13.1	14.0	13.3
Sons and daughters away	Number	1.4	1.3	1.0	.8	1.2
Sons and daughters dead	Number	.4	.1	.3	.2	.2
Children born per family	Number	3.6	3.5	4.0	3.8	3.6
Adult—male units for household:						
Energy scale		3.59	3.93	4.52	4.88	4.06
Protein and minerals scale		4.03	4.32	5.17	5.58	4.55

The following table gives the scale for calculating the number of adult-male units in the households included in this study. It was published by Dr. Edith Hawley in Technical Bulletin No. 8, U. S. Department of Agriculture, June, 1927.

TABLE 8. Double Scale for Calculating the Energy and the Protein and Mineral Needs of a Family.*

Age of individual (years)	Degree of activity**	Energy scale†		Protein and minerals scale‡	
		Male	Female	Male	Female
Over 60	Moderately active	0.9	0.7	0.9	0.7
Over 60	Sedentary	.8	.6	.8	.6
18 to 60	Active	1.2	.9	1.1	.9
Do	Moderately active	1.0	.8	1.0	.8
Do	Sedentary	.8	.7	1.0	.8
15 to 17	Moderately active	1.1	.9	1.5	1.0
10 to 14	Do	.8	—	1.3	—
13 to 14	Do	—	.9	—	1.3
10 to 12	Do	—	.8	—	1.2
6 to 9	Do	.6	.6	1.0	1.0
Under 6	Do	.4	.4	.8	.8

*The standard for each nutrient is based on food as eaten and indicates the nutritive need of a moderately active man 70 kilograms in weight.

**In this study the persons over 60 years of age are considered as moderately active and the persons 18 to 60 are considered as active.

†1.0 = 3,000 calories.

‡1.0 = 67 grams protein; 1.3 grams phosphorous, 0.68 gram calcium; and 0.015 gram iron.

TABLE 9. Social relationships of 138 families in Grayson County, Kentucky—1928.

Items	Groups by amount of cash income				All families
	Under $500	$500 to $999	$1000 to $1499	$1500 and over	
Number of families	42	54	23	19	138
Number of operators	40	52	22	19	133
Number who are church members	15	19	10	8	52
Percent who are church members	38	36	46	42	39
Number who attend church	34	44	19	17	114
Average number of attendances*	16	26	23	24	22
Percent who attend church	85	85	86	90	86
Number of homemakers	41	52	23	19	135
Number who are church members	21	30	14	8	73
Percent who are church members	51	58	61	42	54
Number who attend church	36	45	20	18	119
Average number of attendances*	14	26	26	24	22
Percent who attend church	88	86	87	95	88
Number of children at home, 18 years and over	20	37	17	12	86
Number who are church members	5	6	6	1	18
Percent who are church members	25	16	35	9	21
Number who attend church	11	28	12	7	58
Average number of attendances*	19	31	26	27	27
Percent who attend church	55	76	71	58	67
Number of children at home, under 18 years	55	75	46	42	218
Number who are church members	1	3	7	9	20
Percent who are church members	2	4	15	21	9
Number who attend church	41	66	38	39	184
Average number of attendances*	15	25	27	32	25
Percent who attend church	75	88	83	93	84
Number operators who attend Sunday School	11	18	10	9	48
Average number of attendances*	30	30	23	23	27
Percent who attend Sunday School	28	35	46	47	36
Number homemakers who attend Sunday School	11	19	13	8	51
Average number of attendances*	24	29	26	27	27
Percent who attend Sunday School	27	36	56	42	38
Number sons and daughters, 18 and over, who attend Sunday School	4	15	11	2	32
Average number of attendances*	32	29	28	24	29
Percent who attend Sunday School	20	40	65	17	37
Number of children under 18 who attend Sunday School	20	41	30	35	126
Average number of attendances*	30	30	33	36	32
Percent who attend Sunday School	36	55	65	83	58

*In all the attendance averages given in this section, the average is for only that part of the group which attended at least once during the year. A simple average for the entire group can be obtained by multiplying the given average by the percent who attended.

TABLE 9. (Cont.) Social relationships of 138 families in Grayson County, Kentucky—1928.

Items	Groups by amount of cash income				All families
	Under $500	$500 to $999	$1000 to $1499	$1500 and over	
Number operators attending miscellaneous clubs	2	8	3	4	17
Average number of attendances*	3	2	3	8	4
Percent who attend	5	15	14	21	13
Number homemakers attending miscellaneous clubs	3	5	3	5	16
Average number of attendances*	3	3	3	5	4
Percent who attend	7	10	13	26	12
Number children, all ages, attending miscellaneous clubs	0	16	16	11	43
Average number of attendances*	0	9	8	12	10
Percent who attend	0	14	25	20	14
Lodge: Number families having membership	6	10	7	7	32†
Percent of families having memberships	14	18	30	37	23
Number who attend lodge	5	5	5	7	22
Average number of attendances*	2	5	6	5	4
Percent who attend lodge	12	9	22	37	16
Number operators attending movies	1	2	1	3	7
Average number of attendances*	1	3	4	3	3
Percent who attend movies	2	4	4	16	5
Number homemakers attending movies	1	2	2	3	8
Average number of attendances*	3	3	4	3	3
Percent who attend movies	2	4	9	16	6
Number children, all ages, attending movies	6	15	9	6	36
Average number of attendances*	5	18	14	24	16
Percent who attend movies	8	13	14	11	12
Number operators taking annual vacation	11	19	7	5	42
Average number days vacation during year*	5	9	5	6	7
Percent who took vacation	28	36	32	26	32
Number homemakers taking annual vacation	15	14	10	4	43
Average number days vacation during year*	5	11	6	13	8
Percent who took vacation	37	27	43	21	32
Number children, 18 and over, taking annual vacation	6	11	7	4	28
Average number days vacation during year*	5	12	5	1	7
Percent who took vacation	30	30	41	33	33
Number children, under 18, taking annual vacation	15	16	15	8	54
Average number days vacation during year*	9	7	7	8	8
Percent who took vacation	27	21	33	19	25

*In all the attendance averages given in this section, the average is for only that part of the group which attended at least once during the year. A simple average for the entire group can be obtained by multiplying the given average by the percent who attended.

†Fifteen of these 32 families had 2 memberships in the family (a homemaker in one family, a son in another, 2 memberships for the operator in 13 families).

TABLE 10. Church membership and attendance of operators and homemakers as related to ownership of automobiles and amount of cash income.

Items	Groups by amount of cash income				All families
	Under $500	$500 to $999	$1000 to $1499	$1500 and over	
Percent who are church members					
All operators	38	36	46	42	39
Operators with automobiles	20	24	50	42	33
Operators without automobiles	43	43	42	43	43
All homemakers	51	58	61	42	54
Homemakers with automobiles	27	56	82	42	52
Homemakers without aotomobiles	60	58	42	43	55
Percent who attended church during year					
All operators	85	85	86	90	86
Operators with automobiles	70	88	90	100	88
Operators without automobiles	90	83	83	71	84
All homemakers	88	86	87	95	88
Homemakers with automobiles	82	94	91	100	92
Homemakers without automobiles	90	83	83	86	86
Number of attendances during year (average for those who attended)					
All operators	16	26	23	24	22
Operators with automobiles	15	30	24	28	26
Operators without automobiles	17	24	22	16	21
All homemakers	14	26	26	24	22
Homemakers with automobiles	11	36	27	28	27
Homemakers without automobiles	15	22	25	16	19

TABLE 11. Number of miles from home to church.*

Items	Groups by amount of cash income				All families
	Under $500	$500 to $999	$1000 to $1499	$1500 and over	
All families	2.8	1.5	2.0	1.7	1.8
Families with automobiles	2.5	1.5	1.5	1.6	1.7
Families without automobiles	2.1	1.6	2.5	1.9	1.9

*The distance to the church which the family attended was used; if none of the family attended, the distance to the nearest church was used.